Amendments to the Abstract

Please **add** the following Abstract to this application.

-- A trellis decoding system for use in processing a High Definition Television signal. The trellis decoding system includes a traceback unit that identifies a sequence of antecedent trellis states in accordance with a state transition trellis. A branch metric computer includes eight discrete subunits, one for each possible trellis state. Each subunit generates two output bits indicative of the two trellis branches exiting the trellis state represented by that particular subunit. An add-compare-select unit includes eight discrete subunits, each associated with a particular trellis state. Each subunit includes as an input two bits received from the branch metric computer and as an output two bits. Bit 31 is chosen from 28 and 29. Bit 6 is chosen from the branch metric information input to each subunit. A traceback control memory unit includes an N to 1 multiplexer which receives as an input the output bits from the add-compare-select unit. The present system offers a hardware reduction from prior art.--